AJAX-F

DRUM MAINTENANCE SYSTEM

FOR THE UNIVAC 1050

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AJAX-F

AJAX-F is an integrated set of service routines providing the functions necessary to create and maintain DRUM Master Instruction Files and DRUM Systems Library Files.

AJAX-F is essentially a drum to drum utility program with command cards from the Reader directing its services. Programs may be filed, replaced, deleted, printed, copied, listed, altered and punched. DRUM Files may also be opened, providing they have been previously defined.

AJAX-F will not accept object cards to be filed or replaced from the Reader nor will it punch object cards from the Drum. These functions are provided by OPUS-F (which see).

Drum Formats are those described in the U1050 Fastrand software description document and a familiarity with that document by the reader of this document is assumed.

Card Formats are those of the U1050 PAL Assembly System.

These are four types of Command Cards:

Type 1. I/O Command - INOUT describes the major input Drum File.

Type 2. Program Correction Commands - DELE, FILE, REPL, COPY & ALTER.

Type 3. Service Commands - PRINT, LIST, PUNCH, & OPEN.

Type 4. Misc. Commands - STOP, SORS, HDR.

INOUT COMMAND:

FORM:

OP	OPERANDS
INOUT	p1

where: p1 = A two character systems area identifier which describes the file where work is to be performed.

i.e., ** = Systems Programming File

*$ = Scratch Area

*A = User Library

NOTE: An INOUT Command must precede all other commands to AJAX-F and may be used at any time to change the Input File.

PROGRAM CORRECTION COMMANDS

DELE COMMAND:

FORM:

OP	OPERANDS
DELE	pl

where: pl = Program to be deleted (max. 4 char. I.D.)

NOTE: pl = characters 0, 1, 2, & 3 of 'PD' entry.

REEL COMMAND:

FORM:

OP	OPERANDS	
REPL or	pl	To replace from scratch area on drum
REPLC	pl	To replace from cards (source only)

where: pl = Program to be replaced (max. 4 char. I.D.)

NOTE: pl = characters 0, 1, 2, & 3 of 'PD' entry.

FILE COMMAND:

FORM:

OP	OPERANDS	
FILE or		To file from scratch area on drum
FILEC		To file from cards (source only)

NOTE: No parameters are required. AJAX-F will file the program after the last one presently located at the end of the drum file stated in the Inout Card.

ALTER COMMAND:

FORM:

OP	OPERANDS
ALTER	pl

where: pl = Program to be altered (max. 4 char. I.D.)

NOTE: pl = characters 0, 1, 2, & 3 of 'PD' entry. This card must precede a SORS or HDR correction command (which see) and is used on ly in conjunction with them.

COPY COMMAND:

FORM:

OP	OPERANDS
COPY	p1

where: p1 = two character Systems Area Identifier.

AJAX-F will copy a complete file of programs only from the file designated in the Inout card to the file specified by p1. p1 must have been previously defined.

Normal use of this command would be to preserve a file while the File PD Table is being enlarged through use of the 'open' command after which it could be copied back.

The drum file (p1) to be copied will also be automatically packed, that is 'open' spaces created by alterations and replacements will be eliminated.

This command is especially useful when stop displays Ø63Ø33 + Ø63Ø44 are encountered and file sizes are exceeded. It enables the programmer to eliminate unused areas within the file, effectively providing more space for additional programs.

*SERVICE COMMANDS

PRINT COMMAND:

FORM:

OP	OPERAND
PRINT	p1

where: p1 = Program to be printed (max. 4 char. I.D.)
or △ in which case entire File will be printed.

NOTE: p1 if not △ will equal characters 0, 1, 2, & 3 of PD entry.

PUNCH COMMAND:

FORM:

OP	OPERAND
PUNCH	p1

where: p1 = Program to be punched. (Source only)

NOTE: p1 will equal characters 0, 1, 2 & 3 of PD entry.

LIST COMMAND:

FORM:

OP	OPERAND
LIST	

This command has no parameters and will LIST each program header w/sentinel that is contained in the Input file.

OPEN COMMAND:

FORM

OP	OPERAND
OPEN	p1

where: p1 = A 4 character number representing the number of PD entries for programs required by this file.

This command is used to open a file or enlarge its PD Table.

MISC. COMMANDS

STOP COMMAND:

FORM:

OP	OPERAND
STOP	

This command is always the last command to AJAX-F and must always be present.

The following two commands must be preceded by an ALTER card.

SORS COMMAND:

FORM;

OP	OPERAND
SORS	n1, n2, n3

This command is used to make individual source card corrections by the deleting, adding or replacing of individual lines of code.

where: n1 = Page-line-insert no. where correction is to start. If n2 = 0, source cards which follow will be inserted after n1.

n2 = Page-line-insert no. of last card of deletion. AJAX-F will delete from n1 to n2 inclusive when $n2 \neq 0$.

n3 = Number of source card corrections to be added which immediately follow this card. (0 to 9)

NOTE: 1. n1 = n2 if replacing one card.

2. If more than 9 consecutive source cards are being inserted a second SORS command is required for each additional set of 9 insertions, where n1 must equal "HERE", n2 must be 0 and n3 the number of cards.

HDR COMMAND:

FORM:

OP	OPERAND
HDR	

This command is used to replace a source or object header card. It must be immediately followed by the new header card.

NOTE: ** = Systems Programming File

EXAMPLES

SERVICE	FUNCTION	COMMANDS REQUIRED
PRINTING	Print one program	1. INOUT ** 2. PRINT OPS1 3. STOP
	Print entire file	1. INOUT ** 2. PRINT 3. STOP
	List file	1. INOUT ** 2. LIST 3. STOP
PUNCHING (Source only)	Punch one program	1. INOUT ** 2. PUNCH CTAB 3. STOP
	Punch several program	1. INOUT ** 2. PUNCH CTAB 3. PUNCH MULT 4. PUNCH ADDX 5. STOP
FILING	File program from cards	1. INOUT ** 2. FILEC 99. STOP
	File program from scratch drum area	1. INOUT ** 2. FILE 3. STOP
REPLACING	Replace program from cards	1. INOUT ** 2. REPLC CTAB 99. STOP
	Replace program from scratch drum area	1. INOUT ** 2. REPLC CTAB 3. STOP
COPYING	Copy file to scratch	1. INOUT ** 2. COPY *$ 3. STOP
OPEN	Open file *B Assign 500 sectors for PD entries	1. INOUT *B 2. OPEN 0500 3. STOP

OPEN	Enlarge File *A PD Table to 900 sectors (destroys file)	1. INOUT *A 2. OPEN 0900 3. STOP
DELETING	Delete one program	1. INOUT ** 2. DELE CTAB 3. STOP

NOTE: Open may be used to delete an entire file.

	Delete several programs	1. INOUT ** 2. DELE CTAB 3. DELE OPR1 4. DELE ADDX 5. STOP
SOURCE CORRECTIONS	Insert 5 Source Cards in program BBBB, after page-line-insert #00600 and copy remainder program	1. INOUT ** 2. ALTER BBBB 3. SORS 00600, 0, 5 (-5 Source Additions) 9. STOP
	Same as above but delete lines 00600 to 00605 while making additions	1. INOUT ** 2. ALTER BBBB 3. SORS 00600, 00605, 5 (-5 Source Additions) 9. STOP
SOURCE CORRECTIONS	Delete lines 00600 to 00610 in program BBBB	1. INOUT ** 2. ALTER BBBB 3. SORS 00600, 00610, 0 4. STOP
HdR CHANGE	Replace header program BBBB	1. INOUT ** 2. ALTER BBBB 3. HdR 4. New HdR Card 5. STOP

FUNCTION	COMMANDS REQUIRED
In File *B, Replace Program REG5, delete program CTAB, Print Program XXXX	1. INOUT *B 2. REPL REG5 3. DELE CTAB 4. PRINT XXXX 5. STOP

Commands may be combined in any way at any time to effect the desired results and for efficient use of AJAX-F.

AJAX-F STOP LIST

DISPLAY	REASON AND ACTION
Ø63Ø77	AJAX Ready, Depress Start.
Ø63Ø2Ø	Cannot Locate P1.
Ø63Ø57	Command not recognized Reload Proper Command, depress start.
Ø63Ø50	Header missing REPL or FILE Reload HDR card. If From cards, depress start.
Ø63ØØ1	Page-line-insert number cannot be located; Restart.
Ø63ØØ2	N3 = Ø, on source insertion Reload SORS command and depress start.
Ø63ØØ3	Parameter size error-Reload proper command-depress start.
Ø1ØØØØØ	Printer off-normal, clear problem, depress start.
Ø11ØØØØ	Reader off-normal, Reload card, depress start.

Ø63Ø72	No INOUT card, Load one, depress start.
Ø16ØØØØ	Attempted write in Locked-out Position. Restart.
Ø16ØØ33	Unrecoverable Fastrand Error.
Ø63Ø33	Unable to complete-File size exceeded Restart.
Ø63Ø44	Unable to complete PD Table size exceeded.

NOTES ON ERRORS

AJAX-F where possible will not alter any directory entries on any level until an order (1 command) has been completed successfully. Therefore, most input errors (command card errors) will not in any way effect the condition of the File unless the command preceding the one in error has already done so.

It behooves the programmer to use extreme care in deleting and opening files.

OPEN COMMAND:

The user must insure that all vital data has been saved (copied) from any file of which he wishes to enlarge the PD Table size through use of the OPEN command, since this command effectively destroys all data previously stored in that file.